

Remarks

The Office Action dated August 31, 2001, indicated that the drawings are objected to, and that claims 1-12 and 14-19 stand rejected under §102(e) in view of U.S. Patent No. 6,093,651 (the *Andideh* '651 patent). Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully traverses the rejection and submits that the claimed invention is in condition for allowance.

The rejection to the drawings should be overcome with the herein amendments to the Specification and the attached replacement Figure 2.

Applicant respectfully submits that the Office Action does not cite any particular "features" of the *Andideh* '651 patent that correspond to the presently claimed invention. Rather, the Office Action's citations are either to non-relevant text or so general that nothing specific can be ascertained. Unlike the teachings of the *Andideh* '651 patent, in various embodiments, the present invention is directed to CMP wafer polishing using a method that involves determining that the wafer is being polished in a center-offset manner, and, as a function of the wafer being polished in the center-offset manner, conditioning the pad and positioning the wafer carrier misaligned with respect to the pad.


The citation at column 1 of the *Andideh* '651 patent is to some general background information and is not aligned with any aspect of claim 1 or any other claim. The other citations are generally to the abstract, and all the figures and the entire detailed description, and, therefore, are meaningless. Further, as with the citation at column 1 of the *Andideh* '651 patent, this information is not aligned with any aspect of the claimed invention; rather Office Action merely reiterates the language of claim 1 and tags the cites in a parenthetical afterwards. Accordingly, the Office Action does not particularly mention any aspects of the claimed invention that are aligned with any particular teachings of the *Andideh* '651 patent. In this regard, Applicant respectfully submits that the rejection has not presented a *prima facie* case of anticipation and has not complied with requirements of 35 U.S.C. § 132 and the related sections of the C.F.R. and M.P.E.P.

Notwithstanding the lack of rationale disclosed with the rejection, in reviewing the Andideh '651 patent, Applicant cannot ascertain where the various aspects of the claimed invention are allegedly taught. For example, the Office Action does not make clear where the Andideh '651 patent teaches the claimed aspects that relate to determining that the wafer is being polished in a center-offset manner, and, as a function of the wafer being polished in the center-offset manner, conditioning the pad and positioning the wafer carrier misaligned with respect to the pad (*e.g.*, application claim 1).

In view of the above remarks, Applicant believes that the §102(e) rejection has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

CRAWFORD PLLC
1270 Northland Drive, Suite 390
St. Paul, Minnesota 55120
(651) 686-6633
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Respectfully submitted,

By: 
Name: Robert J. Crawford
Reg. No.: 32,122

On pages 7-8, lines 18-22 and 1-6 respectively:

FIG. 1 shows a top view and FIG. 2 shows a side view of a CMP arrangement 100, according to another example embodiment of the present invention. The CMP arrangement includes a polishing table 210 having a polishing pad 140. The polishing table 210 is capable of rotation, such as shown by directional arrow 141. A wafer carrier 130 is arranged over the pad and adapted to carry a semiconductor wafer 135 and bring it in contact with the pad 140 for polishing. Although FIG. 1 shows the wafer carrier 130 located directly over the pad 140, the wafer carrier 130 may be located with only a portion of the carrier 130 over the pad 140 in order to enhance the application of the present invention. FIG. 2 [shown] shows the wafer carrier 130 (along with wafer 135) misaligned over and with respect to the center of the pad [140a] 140. The wafer carrier is further arranged to rotate, such as shown by directional arrow 131. Conditioning wheel 110 is arranged over the pad 140 and used to condition the pad, responsive to detecting center-offset polishing. Supply 120 is used to supply conditioning materials such as water or de-ionized water to the pad 140.

On pages 9-10, lines 16-21 and 1-2 respectively:

For example, FIG. 2 shows a pad [140a] 140 that has been thinned near the edge 230. The thickness at the center of the pad is greater than the thickness near the edge 230 of the pad [140a] 140. When a wafer 135 is held against the pad [140a] 140 having the edge 230 thinned, the center of the wafer 135 can be held at a location of the pad [140a] 140 having greater thickness than the edge 230. Due to the greater thickness near the center, the wafer 135 is polished center-fast. Alternatively, the center of the pad 140 could be thinned resulting in the edge having a greater thickness relative to the center thickness prior to thinning and enhancing center-slow polishing. In another alternative, various portions of the pad 140 could be thinned.